

What Is Claimed Is:

5 1. A graft ligament having a first end and  
second end, said first end and said second end  
defining a first longitudinal axis, and said graft  
ligament having a substantially uniform cross-  
sectional thickness along said first longitudinal axis  
between said first end and said second end, said graft  
10 ligament comprising:

15 a tendon having a third end and a fourth end,  
said third end and said fourth end defining a second  
longitudinal axis therebetween, said tendon having a  
non-uniform cross-sectional thickness along said  
second longitudinal axis between said third end and  
said fourth end, and said tendon having a first  
portion, a second portion, and a third portion along  
said second longitudinal axis between said third end  
and said fourth end; and

20 a securing material securing at least one section  
of said first portion, said second portion, and said

third portion with another at least one section of  
said first portion, said second portion, and said  
third portion so as to form said third end and said  
fourth end, respectively, and so as to form said graft  
ligament with a substantially uniform cross-sectional  
thickness along said first longitudinal axis between  
said first end and second end.

2. A graft ligament according to claim 1  
wherein said securing material is a suturing material.

3. A graft ligament according to claim 2  
wherein said at least one section of said first  
portion, said second portion, and said third portion  
are sutured to said another at least one section of  
said first portion, said second portion, and said  
third portion at said third end and said fourth end,  
respectively.

4. A graft ligament according to claim 1  
wherein said tendon is harvested from a human body.

5. A graft ligament according to claim 1  
wherein said tendon has said first portion, said  
second portion, and said third portion in series from  
said third end to said fourth end, and further wherein  
said second portion has a given mean cross-sectional  
thickness, and said first portion and said third  
portion each have a smaller mean cross-sectional  
thickness than said given mean cross-sectional  
thickness.

6. A graft ligament according to claim 5  
wherein said first portion and said third portion are  
each folded against said second portion and sutured  
thereto, respectively.

7. A graft ligament according to claim 6  
wherein said first portion is folded against and  
sutured to said second portion along a first given  
length, and said third portion is folded against and

sutured to said second portion along a second given length.

8. A graft ligament according to claim 7  
5 wherein said first given length is shorter than said second given length.

9. A graft ligament according to claim 7  
wherein said first given length and said second length are equal to one another.

10. A graft ligament according to claim 7  
wherein the total length of said first given length and said second given length is equal to the length from said first end to said second end of said graft  
15 ligament.

11. A graft ligament according to claim 7  
wherein the total length of said first given length and said second given length is less than the length  
20 from said first end to said second end of said graft ligament.

12. A graft ligament according to claim 6  
wherein said first portion and said third portion are  
each folded upon itself along a third given length and  
a fourth given length, respectively, and sutured  
thereto, said second portion is folded upon itself and  
sutured therebetween, and said first portion and said  
third portion are sutured to one another.

13. A graft ligament according to claim 12  
wherein said third given length and said fourth given  
length are equal to one another.

14. A graft ligament according to claim 12  
wherein said first given length is longer than said  
third given length.

15. A graft ligament according to claim 6  
wherein said second portion is folded against itself,  
a bone core is disposed between said first portion and  
said third portion, and said first portion and said

third portion are secured together with said bone core disposed therebetween.

16. A graft ligament according to claim 15 wherein said folded second portion, forming a first segment and second segment, is sutured therebetween.

17. A graft ligament according to claim 1 further comprising at least two of said tendons secured together to form said graft ligament.

18. A method of making a graft ligament having a first end and second end, said first end and said second end defining first a longitudinal axis, and said graft ligament having a substantially uniform cross-sectional thickness along said first longitudinal axis between said first end and said second end, said method of making said graft ligament comprising:

providing a tendon having a third end and a fourth end, said third end and said fourth end

defining a second longitudinal axis therebetween, said tendon having a non-uniform cross-sectional thickness along said second longitudinal axis between said third end and said fourth end, and said tendon having a first portion, a second portion, and a third portion along said second longitudinal axis between said third end and said fourth end; and

securing at least one section of said first portion, said second portion, and said third portion to another at least one section of said first portion, said second portion, and said third portion so as to form said third end and said fourth end, respectively, and so as to form said graft ligament having a substantially uniform cross-sectional thickness along said first longitudinal axis between said first end and second end.

19. A method of making a graft ligament according to claim 18 wherein the step of securing at least one section of said first portion, said second portion, and said third portion to another at least

one section of said first portion, said second portion, and said third portion includes the use of a suture material.

5           20. A method of making a graft ligament  
according to claim 18 wherein said first portion, said  
second portion, and said third portion are in series  
from said third end to said fourth end, and further  
wherein the step of securing at least one section of  
10       said first portion, said second portion, and said  
third portion to said another at least one section of  
said first portion, said second portion, and said  
third portion includes the steps of folding said first  
portion against said second portion along a first  
15       given length, folding said third portion against said  
second portion along a second given length, suturing  
said folded first portion to said second portion, and  
suturing said third portion to said second portion.

20           21. A method of making a graft ligament  
according to claim 20 wherein said first given length



of said first folded portion is shorter than said second given length of said third folded portion.

22. A method of making a graft ligament according to claim 20 wherein said first given length of said first folded portion is equal to said second given length of said third folded portion.

23. A method of making a graft ligament according to claim 18 wherein said first portion, said second portion, and said third portion are in series from said third end to said fourth end, and further wherein the step of securing at least one section of said first portion, said second portion, and said third portion to said another at least one section of said first portion, said second portion, and said third portion includes the steps of folding said first portion against itself, folding said third portion against itself, suturing said folded first portion, suturing said folded third portion, folding said

second portion against itself, and suturing said folded second portion.

24. A method of making a graft ligament according to claim 18 wherein said first portion, said second portion, and said third portion are in series from said third end to said fourth end, and further wherein the step of securing at least one section of said first portion, said second portion, and said third portion to said another at least one section of said first portion, said second portion, and said third portion includes the steps of folding said second portion against itself, positioning a bone core between said first portion and said third portion, and securing said first portion and said third portion together with said bone core disposed therebetween.

25. A method of making a graft ligament according to claim 24 further comprising the step of securing said folded second portion to itself.